

Serial No. 09/647,405
Attorney Docket No. PX3904USW

second volumes of said pharmaceutical product are dispensed during said first and second actuations of said valve stem, and whereby said first and second volumes of said pharmaceutical product dispensed during said first and second actuations of said valve stem are substantially equal.

Claim 10 (Currently amended): A metered dose inhaler, comprising:

a metering valve assembly according to Claim 1;

an actuator; and

an aerosol container containing the pharmaceutical product a drug and a hydrofluoroalkane propellant;

a valve stem having a dispensing channel, said dispensing channel being adapted to receive and expel a predetermined volume of said drug when said valve stem is actuated; and
a valve body having a metering chamber, said metering chamber including at least one metering chamber wall, said metering chamber being in communication with said dispensing channel during said actuation of said valve stem, said metering chamber being adapted to receive a first volume of said drug at a first time, dispense said first volume of said drug during a first actuation of said valve stem, receive a second volume of said drug at a second time and dispense said second volume of said drug during a second actuation of said valve stem, at least said metering chamber wall comprising a material selected from the group consisting of a fluorinated ethylene propylene, polytetrafluoroethylene, a copolymer of a polytetrafluoroethylene and combinations thereof, whereby substantially all of said first and second volumes of said drug are dispensed during said first and second actuations of said valve stem, and whereby said first and second volumes of said drug dispensed during said first and second actuations of said valve stem are substantially equal.

Claim 11 (Previously added): The metering valve assembly of Claim 1, wherein said metering valve assembly includes at least one metering chamber seal disposed proximate said metering chamber.

Claim 12 (Previously added): The metering valve assembly of Claim 1, wherein said metering valve assembly includes at least one elastic component in communication with at least said valve stem.

Claim 13 (Currently amended): The metering valve assembly of Claim 12, wherein said elastic component comprises a spring.

Serial No. 09/647,405
Attorney Docket No. PX3904USW

Claim 14 (Previously added): ~~A~~ The metering valve assembly of Claim 1 for dispensing a pharmaceutical product, comprising:

~~a valve stem having a dispensing channel, said dispensing channel being adapted to receive and expel a predetermined volume of said pharmaceutical product when said valve stem is actuated; and~~

~~a valve body having a metering chamber, said metering chamber including at least one metering chamber wall, said metering chamber being in communication with said dispensing channel during said actuation of said valve stem, said metering chamber being adapted to receive a first volume of said pharmaceutical product at a first time, dispense said first volume of said pharmaceutical product during a first actuation of said valve stem, receive a second volume of said pharmaceutical product at a second time and dispense said second volume of said pharmaceutical product during a second actuation of said valve stem, at least said metering chamber wall and wherein said dispensing channel comprises~~ comprise a material selected from the group consisting of a fluorinated ethylene propylene, polytetrafluoroethylene, a copolymer of a polytetrafluoroethylene and combinations thereof, whereby substantially all of said first and second volumes of said pharmaceutical product are dispensed during said first and second actuations of said valve stem, and whereby said first and second volumes of said pharmaceutical product dispensed during said first and second actuations of said valve stem are substantially equal.

Claim 15 (Currently amended): A metered dose inhaler, comprising:

a metering valve assembly according to Claim 14;

an actuator; and

an aerosol container containing the pharmaceutical product ~~a drug and a hydrofluoroalkane propellant;~~

~~a valve stem having a dispensing channel, said dispensing channel being adapted to receive and expel a predetermined volume of said drug when said valve stem is actuated; and~~

~~a valve body having a metering chamber, said metering chamber including at least one metering chamber wall, said metering chamber being in communication with said dispensing channel during said actuation of said valve stem, said metering chamber being adapted to receive a first volume of said drug at a first time, dispense said first volume of said drug during a first actuation of said valve stem, receive a second volume of said drug at a second time and dispense said second volume of said drug during a second actuation of said valve stem, at least said metering chamber wall and said dispensing channel comprise a~~

Serial No. 09/647,405
Attorney Docket No. PX3904USW

~~material selected from the group consisting of a fluorinated ethylene propylene, polytetrafluoroethylene, a copolymer of a polytetrafluoroethylene and combinations thereof, whereby substantially all of said first and second volumes of said drug are dispensed during said first and second actuations of said valve stem, and whereby said first and second volumes of said drug dispensed during said first and second actuations of said valve stem are substantially equal.~~

Claim 16 (New): A metering valve assembly for dispensing a pharmaceutical product, comprising:

a valve body;

one or more metering chamber walls contained within the valve body, said one or more walls comprising a fluorinated polymer and defining at least a portion of a metering chamber; and

a valve stem slidingly engaged with the metering chamber via one or more valve seals.

Claim 17 (New): The metering valve assembly of Claim 16, wherein the fluorinated polymer is selected from the group consisting of a fluorinated ethylene propylene, a polytetrafluoroethylene, a copolymer of a polytetrafluoroethylene, or combinations thereof.

Claim 18 (New): The metering valve assembly of Claim 16, wherein the fluorinated polymer comprises polytetrafluoroethylene.

Claim 19 (New): The metering valve assembly of Claim 16, wherein the one or more metering chamber walls consist essentially of a fluorinated polymer.

Claim 20 (New): The metering valve assembly of Claim 16, wherein the one or more metering chamber walls consist essentially of polytetrafluoroethylene.

Claim 21 (New): The metering valve assembly of Claim 16, wherein the one or more metering chamber walls consist essentially of a material selected from the group consisting of a fluorinated ethylene propylene, a polytetrafluoroethylene, a copolymer of a polytetrafluoroethylene, or combinations thereof.

Claim 22 (New): A metered dose inhaler for dispensing a drug comprising:

Serial No. 09/647,405
Attorney Docket No. PX3904USW

an aerosol container containing a drug and a hydrofluoroalkane propellant;
a valve body;
one or more metering chamber walls contained within the valve body, said one or more walls comprising a fluorinated polymer and defining at least a portion of a metering chamber; and
a valve stem slidingly engaged with the metering chamber via one or more valve seals.

Claim 23 (New): The metered dose inhaler of Claim 22, wherein the fluorinated polymer is selected from the group consisting of a fluorinated ethylene propylene, a polytetrafluoroethylene, a copolymer of a polytetrafluoroethylene, or combinations thereof.

Claim 24 (New): The metered dose inhaler of Claim 22, wherein the fluorinated polymer comprises polytetrafluoroethylene.

Claim 25 (New): The metered dose inhaler of Claim 22, wherein the one or more metering chamber walls consist essentially of a fluorinated polymer.

Claim 26 (New): The metered dose inhaler of Claim 22, wherein the one or more metering chamber walls consist essentially of polytetrafluoroethylene.

Claim 27 (New): The metered dose inhaler of Claim 22, wherein the one or more metering chamber walls consist essentially of a material selected from the group consisting of a fluorinated ethylene propylene, a polytetrafluoroethylene, a copolymer of a polytetrafluoroethylene, or combinations thereof.